

**ALLSHENG**

## Temperature Control and Mixing Instrument

MSC-3000

MS-3000

MK-3000



HANGZHOU ALLSHENG INSTRUMENTS CO., LTD.

## Temperature Control and Mixing Instrument

Hangzhou Allsheng Instruments focuses on laboratory pre-processing solutions, and has launched a new generation of innovative temperature control and mixing equipment: MSC-3000, MS-3000 thermo shaker incubator and MK-3000 dry bath incubator .

Superior temperature control, excellent mixing performance and easy-to-use software function ensure complete, reliable and repeatable experimental results.

With Allsheng MateB series blocks, it can meet your multiple experimental requirements.



The new generation of temperature control and mixing instrument has greatly improved the operation mode, experimental efficiency and stability compared with the existing products.



### Easier setup operation

Equipped with a 4.3-inch LCD screen. Clear graphical operation.



### Faster module replacement

The module handle can be quickly replaced without tools



### More stable reaction conditions

Equipped with ThermoLid, keep the reagent concentration constant; built-in temperature sensor to control temperature precisely

## MSC-3000/MS-3000 Thermo Shaker Incubator



### Easy module replacement

Simple and quick module replacement by flipping the handle



### Module identification

Automatic recognition module for automatic adjustment of settings



### 4.3-inch touch screen

Intuitive and easy operation, freely programmable

Real-time display of temperature curves for easy reading and access



### High stability and small

Stand still even at maximum mixing speed



### Thermo and shake

Temperature control and mixing, the reaction is more uniform

Effectively improve sample reaction uniformity

## The new generation of MSC-3000, MS-3000 thermo shaker incubators provide multiple functions:

- **Special mixing structure and excellent software control bring excellent mixing performance and temperature management functions**

- **Open design, more comprehensive program settings**

Multi-level heating and cooling rate settings, can select the appropriate method according to the experimental needs;

Freely programmable, both forward and reverse rotation can be set;

Program continuous running function, multiple programs are linked to each other, no need to set repeatedly;

MSC-3000 has cryopreservation function. After the program is completed, the sample can be automatically cryopreserved.

- **Excellent performance, precise temperature control**

Can choose full power heating and cooling, or choose the heating and cooling rate of other gears to prevent the experiment from failing due to uneven temperature changes;

Optional ThermoLid accessories can effectively prevent condensation water on the tube lid and tube wall and improve the temperature uniformity in the test tube.

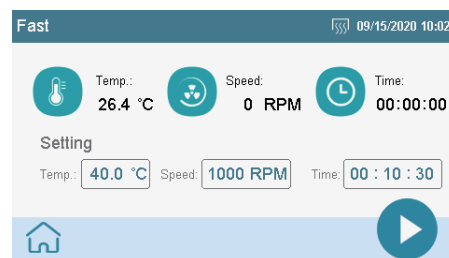


Figure: Program quick setting interface

- **Multiple block choices, faster loading and unloading**

Provide modules suitable for common microplates and centrifuge tubes to meet various experimental needs;

The newly designed module installation method can quickly replace the module without tools.

- **Smarter and easier to use**

4.3-inch touch screen, intuitive and easy to operate;

Power-off recovery function, it can automatically run according to the original set program when the power is restored;

Multiple modules are optional and can be automatically identified.



Figure: Toggle handle to replace block

## MK-3000 Dry Bath Incubator

Many experiments require precise temperature control while rapidly heating/cooling. The MK-3000 achieves precise control of sample temperature by using Peltier technology.



### Easy module replacement

Simple and quick module replacement by flipping the handle



### Module identification

Automatic smart recognition module for automatic adjustment of settings



### 4.3-inch touch screen

Intuitive and easy operation, freely programmable  
Display temperature time run curves for easy reading and access



### Fast cooling

Rapid cooling rate up to 5°C/min  
Reduce waiting time



### Precise temperature control

Focus on temperature control function  
Meet experimental heating and cooling needs

### MK-3000 dry bath incubator has flexible software features:

- **Smarter and easier to use**

4.3-inch touch screen, intuitive and easy to operate;

Power-off recovery function, it can automatically run according to the original set program when the power is restored;

Multiple modules are optional and can be automatically identified.



- **Excellent software features for superior temperature management**

Multi-level heating and cooling rate settings, can select the appropriate method according to the experimental needs;

Freely programmable, the program runs continuously, and multiple programs are linked to each other;

Can choose full power heating and cooling, or choose the heating and cooling rate of other gears to prevent the experiment from failing due to uneven temperature changes;

Optional ThermoLid accessories can effectively prevent condensation water on the tube lid and tube wall and improve the temperature uniformity in the test tube.

## Suitable Module: MateB Series Block

According to different needs, Allsheng has designed their own modules for consumables such as 0.2 ml to 50 ml centrifuge tubes, MTP, DWP, 96/384 PCR plates and so on.

All modules are equipped with a convenient replacement mechanism, making module replacement quick and easy. No tools required, just press the handle on the rear of the module to remove the module in seconds. In addition, the thermal insulation module considers the user's safety and effectively prevents burning fingers.



MateB 5.0mL



MateB 12.5mm



MateB Cryo



MateB 15mL



MateB 50mL



MateB DWP 500



MateB DWP 1000



MateB PCR 96



MateB PCR 384



MateB Plate-1



MateB Plate-2



MateB 0.5mL



MateB 0.5mL+1.5mL



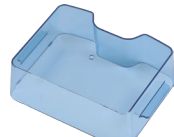
MateB 1.5mL



MateB 12mm



L-Lid Transparent Lid



H-Lid Transparent Lid

## Optional Performance Component: ThermoLid

When incubating test tubes, PCR plates, etc., condensation will form on the tube walls and caps. Allsheng new generation of temperature control and mixing instrument with ThermoLid technology that reliably prevents condensation inside the tube, allowing consistent sample concentrations over the incubation time.

Therefore, the ThermoLid facilitates further improvements in temperature uniformity, allowing the sample to obtain optimal reaction conditions that yield the best results.

### Thermo Lid



Effectively prevent reagent evaporation, improve the uniform concentration

### Installation and Wiring



Magnet port, easy and fast installation; stable data transmission to ensure thermo lid performance

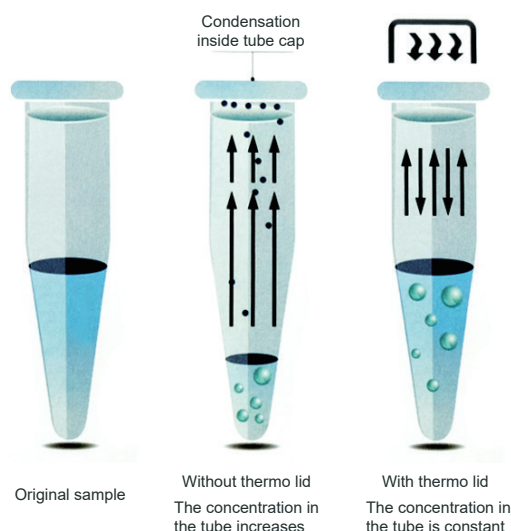
### Height Adjustment



Compatible with various specifications of centrifuge tubes; can be used for up to 5 ml centrifuge tubes

### Feature

- ThermoLid has height-adjustable technology, which makes the thermal lid fit on the top of the sample tube and closely contact with the sample, providing more precise temperature control, enabling better heat transfer anywhere in the sample tube, and improving temperature uniformity for safe sample heating
- Links with automatic identification and operation for user-friendly operation
- Obtain constant reaction conditions in the sample for best results
- ThermoLid can be used with various modules that load tubes below 5 ml, such as 0.5 ml, 1.5 ml, 5 ml and 96 PCR plates.



### Excellent temperature control and sample handling

During the incubation process of conventional thermo shaker incubator and dry bath incubator, water vapor will condense on the tube cap and tube wall to form condensed water due to the evaporation of liquid. This situation can cause changes in the concentration of liquid components, which can lead to the reaction not being carried out in the optimal configuration, and can also cause difficulties in the recovery of samples after incubation due to the liquid evaporation.

ThermoLid technology independently controls the temperature. You only need to preheat the thermo lid (the preset temperature of the thermo lid is more than 5 °C higher than the temperature of the MateB series blocks), which can effectively prevent the generation of condensed water. The temperature uniformity of the system is guaranteed.

## ■ Specification

Model	MSC-3000	MS-3000	MK-3000
Type	heating/cooling/mixing	heating/mixing	heating/cooling
Temp. control range	0 °C~105 °C	RT+5 °C~105 °C	-10 °C~105 °C
Time setting	99 h59 min/99 min59 s	99 h59 min/99 min59 s	99 h59 min/99 min59 s
Temp. control accuracy @20 °C~50 °C	±0.5 °C	±0.5 °C	±0.5 °C
Temp. uniformity @20 °C~50 °C	±0.5 °C	±0.5 °C	±0.5 °C
Display accuracy	0.1 °C	0.1 °C	0.1 °C
Heating time 20 °C~100 °C	≤15 min	≤15 min	≤10 min
100 °C~20 °C	≤15 min	----	≤10 min
Cooling time 25 °C~4 °C <sup>[1]</sup>	≤20 min	----	≤15 min (25 °C~0 °C)
20 °C~0 °C <sup>[2]</sup>	≤20 min	----	≤15 min (25 °C~-10 °C)
Heating rate gear <sup>[3]</sup>	5 gears can be set	5 gears can be set	5 gears can be set
Cooling rate gear <sup>[4]</sup>	4 gears can be set	----	5 gears can be set
Speed <sup>[5]</sup>	100~3000 rpm	100~3000 rpm	----
Mixing orbit	3 mm	3 mm	----
Program number	50	50	50
A single program can be divided into number	5	5	5
Cycle number	99	99	99
Module identification function	Yes	Yes	Yes
Display	4.3 inch touch screen	4.3 inch touch screen	4.3 inch touch screen
Port	USB (program related); 4-pin plug (thermo lid related)	USB (program related); 4-pin plug (thermo lid related)	USB (program related); 4-pin plug (thermo lid related)
ThermoLid	Yes (optional)	Yes (optional)	Yes (optional)
Thermo lid Temp. range	RT+5 °C~110 °C	RT+5 °C~110 °C	RT+5 °C~110 °C
Maximum power	200 W	200 W	200 W
Net weight (including modules)	≤10 Kg	≤9 Kg	≤7 Kg
Size (W×D×H) mm	220×318×154	220×318×154	220×318×154

<sup>[1]</sup> Indicates detection at ambient temperature ≤ 25 °C

<sup>[2]</sup> Indicates detection at ambient temperature ≤ 20 °C

<sup>[3]</sup> 5 gears including: MAX, 3 °C/min, 2 °C/min, 1 °C/min, 0.1 °C/min

<sup>[4]</sup> 4 gears including: MAX, 1 °C/min, 0.5 °C/min, 0.1 °C/min

<sup>[5]</sup> The maximum speed varies according to the module used

## ■ Ordering Information

Code	Product description
AS-02080-00	MSC-3000 thermo shaker incubator (heating and cooling type), 100~240 VAC, 200 W
AS-02090-00	MS-3000 thermo shaker incubator (heating type), 100~240 VAC, 200 W
AS-01280-00	MK-3000 dry bath incubator (heating and cooling type), 100~240 VAC, 200 W

## ■ Suitable Module

Code	Type	Description	Max. speed	Max. Temp.	Thermo lid available
AS-02081-01	MateB 0.5 mL	24×0.5 mL tube	2000 rpm	105 °C	✓
AS-02081-02	MateB 1.5 mL	24×1.5 mL tube	2000 rpm	105 °C	✓
AS-02081-03	MateB 2.0 mL	24×2.0 mL tube	2000 rpm	105 °C	✓
AS-02081-04	MateB 0.5 mL+1.5 mL	15×0.5 mL+20×1.5 mL tube	2000 rpm	105 °C	✓
AS-02081-05	MateB 5.0 mL	8×5 mL tube	1000 rpm	105 °C	✓
AS-02081-06	MateB 12 mm	24×φ12 mm tube	2000 rpm	105 °C	-
AS-02081-08	MateB Cryo	24×1.5 mL/2.0 mL cryovial	2000 rpm	105 °C	-
AS-02081-09	MateB 15 mL	8×15 mL tube	1000 rpm	105 °C	-
AS-02081-10	MateB 50 mL	4×50 mL tube	1000 rpm	105 °C	-
AS-02081-11	MateB Plate-1	96×0.2 mL microplate	3000 rpm	105 °C	✓
AS-02081-12	MateB Plate-2	96×2 mL deepwell plate	1000 rpm	105 °C	-
AS-02081-13	MateB PCR 96	96×0.2 mL PCR plate	2000 rpm	105 °C	✓
AS-02081-14	MateB PCR 384	384-well PCR plate	3000 rpm	105 °C	✓
AS-02081-15	MateB DWP 500	96/500 µL deepwell plate	1600 rpm	105 °C	✓
AS-02081-16	MateB DWP 1000	96/1,000 µL deepwell plate	1600 rpm	105 °C	✓
AS-02081-17	MateB L-Lid	L-Lid transparent lid (low) is suitable for MateB 0.5 mL, 1.5 mL, 2.0 mL, 5 mL, Plate-1, Plate-2, PCR96 and PCR384			
AS-02081-18	MateB H-Lid	H-Lid transparent lid (high) is suitable for MateB DWP 500/1000			
AS-02081-26	ThermoLid	Thermo lid	/	/	/

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